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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,007	06/12/2000	Francis Tufaro	08582/009002	4193

7590 10/16/2002

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EXAMINER	
SCHULTZ, JAMES	

ART UNIT	PAPER NUMBER
1635	11

DATE MAILED: 10/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.	Applicant(s)	
09/592,007	TUFARO ET AL.	
Examiner	**Art Unit**	
J. Douglas Schultz	1635	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 13 September 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☒ Applicant's reply has overcome the following rejection(s): *102(b) over Hodgson et al.*.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See other*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: *none*.

   Claim(s) objected to: _____.

   Claim(s) rejected: *1-5,7-10,15-22 and 24-27 for reason of record*.

   Claim(s) withdrawn from consideration: _____.

ANDREW WANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

8. ☐ The proposed drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☒ Other: *See Continuation Sheet*

Continuation of 10. Other: Applicants arguments have been considered but are not persuasive regarding the rejection of obviousness.

The Final Office Action dated June 17, 2002 indicates that Hodgson et al. teaches the use of cationic compounds to increase the efficiency of viral transfection, wherein said methods could also be used in vivo. Applicant argues that Hodgson et al. does not teach the use of glycosaminoglycan (GAG) analogs to increase transfection, whereas the instant claims do. The examiner depended on Dyer et al., not on Hodgson et al., to teach the use of other GAG analogs, rendering this argument moot.

Applicant further argues that Dyer et al. actually teaches away from in vivo methods. However, the previous Office Action does not rely upon Dyer for an in vivo showing, but on the combination of Hodgson et al. (see abstract and final Office Action at 102(b) rejection), Mislick et al., and Marasco et al. (see abstracts of both and final Office Action at 103(a) rejection). Dyer et al. is relied upon solely to show that GAGs can be used to increase the efficiency of viral transfection.

Applicant asserts, despite Dyer et al.s' demonstration that exogenous GAGs can induce viral-specific entry into cells, that Dyer et al. teaches away from the use of GAG's to enhance viral transfection because the methods of Dyer et al. use a GAG negative ("mutant") cell line. Said mutation was chosen because it was helpful in deciphering the mechanism of how GAG improves viral-specific entry. Moreover, the mechanism worked out by Dyer et al. suggests that GAG-induced viral specific entry would occur in most, if not all cell types, because it is the presence of the GAGs themselves that are thought to provide an efficient matrix for virus adsorption (see abstract).

Applicant also asserts that Dyer et al. teach away from the instant application because Dyer et al. indicate that GAG-mediated inhibition of cellular entry occurs for some enveloped virions. This position is not adopted, because Dyer et al. uses this as a context only to explain why his own results are surprising; that is, GAG-induced viral-specific transfection is precisely what is novel about this study, and it is for this reason alone that the examiner relies upon this reference.

Further, applicant argues that Mislick et al. teaches away from using of exogenous GAGs in in vivo transfections, because Mislick et al. teach that GAGs present in blood plasma can adversely affect transfection efficiency. However, said teaching only refers to blood plasma levels of GAGs, not to levels present in the liposomes of Mislick et al. On the contrary, and as stated in the last Office Action, Mislick et al. clearly teach the use of poly-lysine and DEAE-dextran in liposomes to increase transfection efficiency, as the instant application also claims.

Applicant argues that Marasco does not teach the invention as a whole. Marasco is relied upon only for the teaching of HIV vectors for use in transfection. Since applicants arguments have failed to address the points as outlined above, no claims are in condition for allowance.